DG20
Ultraminiature automotive relays



- Ultra miniature automotive relays
- High resistance to inrush current
- 30A maximum continuous current for pcb mounting
- Applications include DC motor drives
- RoHS Compliant

Contacts

Contact number & arrangement	SPST-NO (1NO), SPDT (1 C/O)
Contact material	AgNi0.15, AgSnOInO,
Max. switching voltage	16VDC
Max. continuous current	SPST-NO: 30A / 12VDC SPDT: 30A (NO) / 25A (NC) / 12VDC
Max. inrush current	SPST-NO: 100A, SPDT: 30A NO / 25A NC
Rated current	SPST-NO: 30A, SPDT: 30A (NO), 25A (NC)
Max. breaking capacity	SPST-NO: 100A
Min. breaking capacity	0.5A / 12VDC
Min. switching current	10mA 12VDC (contact material dependent)
Resistance	< 100mΩ at 0.1A / 6VDC

Coil

Rated voltage	6, 10, 12 & 24VDC
Must release voltage	≥ $0.125U_n$
Operating range of supply voltage	See Table 1
Rated power consumption	0.55W

Insulation

Dielectric strength coil - contact	 500Vrms / 1min

General data

Operating time (typical value)	≤3msec
Release Time	≤1.5msec (Typical)
Electrical Life resistive	 > 2 x10^5 (20A@13.5VDC on SPST-NO contacts. 6 ops/minute
Mechanical life	> 10^7
Dimensions (L x W x H)	12.9 x 12 x 9.9mm
Weight	4g approx
Ambient Temperature storage operating	 -40... + 155°C -40... + 105°C
Cover protection category	IP67
Shock resistance	30g, 6ms
Vibration resistance	6g, 10-500Hz

American Electronic Components Inc., 1101 Lafayette St., Elkhart, IN 46516
Toll Free: (888) 847-6552, Tel: (574)-295-6330 www.aecsensors.com

DG20

Ultraminiature automotive relays

Coil Data - DC voltage version

Table 1

Coil Code	Rated Voltage V DC	Coil Resistance ±10% @ 23ºC Ω	Must Operate Voltage Max. V DC	Allowable Voltage * V DC	Must Release Voltage Min. V DC
1006	6	64	3.5	13.6	0.75
1010	10	181	5.7	22.7	1.25
1012	12	254	6.9	27.2	1.50
1024	24	1000	14.0	54.4	3.00

* Above 85ºC, maximum allowable voltage should be reduced to 72%

Ordering Codes

Type | Contact Material | Contact Number & Arrangement | Cover protection category | Terminal type | Coil Code

D G 2 0 – [ ][ ][ ][ ] – 3 5 – [ ][ ][ ][ ]

Contact Materials
- 70 - AgSnOInO
- 80 - AgNi0.15

Contact number & arrangement
- 11 - SPDT (1 C/O)
- 21 - SPNO (1 NO)

Cover Protection Category
- 3 - Covered, sealed IP67*

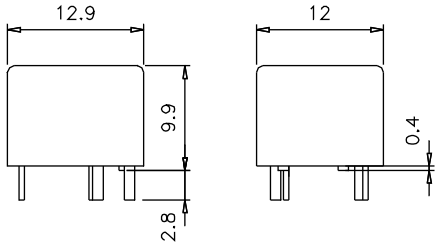
Connection Mode
- 5 - PCB

Coil Code: see Table 1

* For optimum electrical life, please remove the knock off nib after the cleaning process.

Overall dimensions

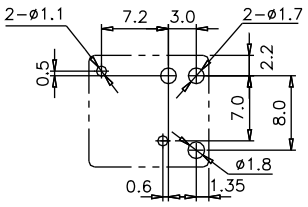
Fig. 1



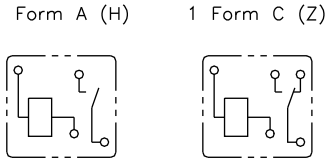
Dimensions in mm

PCB mounting dimensions

Fig. 2



Mounting Holes (Bottom View)



Wiring Diagrams (Bottom View)

American Electronic Components, Inc. 1101 Lafayette St., Elkhart, IN 46516 Tel: (888) 847-6552 www.aecsensors.com

Specifications and availability subject to change.